

## Environmental Protection Agency

## § 98.91

### § 98.88 Definitions.

All terms used in this subpart have the same meaning given in the Clean Air Act and subpart A of this part.

### Subpart I—Electronics Manufacturing

SOURCE: 75 FR 74818, Dec. 1, 2010, unless otherwise noted.

### § 98.90 Definition of the source category.

(a) The electronics manufacturing source category consists of any of the production processes listed in paragraphs (a)(1) through (a)(5) of this section that use fluorinated GHGs or N<sub>2</sub>O. Facilities that may use these processes include, but are not limited to, facilities that manufacture micro-electromechanical systems (MEMS), liquid crystal displays (LCDs), photovoltaic cells (PV), and semiconductors (including light-emitting diodes (LEDs)).

(1) Any electronics production process in which the etching process uses plasma-generated fluorine atoms and other reactive fluorine-containing fragments, that chemically react with exposed thin-films (e.g., dielectric, metals) or substrate (e.g., silicon) to selectively remove portions of material.

(2) Any electronics production process in which chambers used for depositing thin films are cleaned periodically using plasma-generated fluorine atoms and other reactive fluorine-containing fragments.

(3) Any electronics production process in which wafers are cleaned using plasma generated fluorine atoms or other reactive fluorine-containing fragments to remove residual material

from wafer surfaces, including the wafer edge.

(4) Any electronics production process in which the chemical vapor deposition (CVD) process or other manufacturing processes use N<sub>2</sub>O.

(5) Any electronics manufacturing production process in which fluorinated GHGs are used as heat transfer fluids to cool process equipment, to control temperature during device testing, to clean substrate surfaces and other parts, and for soldering (e.g., vapor phase reflow).

### § 98.91 Reporting threshold.

(a) You must report GHG emissions under this subpart if electronics manufacturing production processes, as defined in § 98.90, are performed at your facility and your facility meets the requirements of either § 98.2(a)(1) or (a)(2). To calculate total annual GHG emissions for comparison to the 25,000 metric ton CO<sub>2</sub>e per year emission threshold in § 98.2(a)(2), follow the requirements of § 98.2(b), with one exception. Rather than using the calculation methodologies in § 98.93 to calculate emissions from electronics manufacturing production processes, calculate emissions of each fluorinated GHG from electronics manufacturing production processes by using paragraphs (a)(1), (a)(2), or (a)(3) of this section, as appropriate, and then sum the emissions of each fluorinated GHG by using paragraph (a)(4) of this section.

(1) If you manufacture semiconductors or MEMS you must calculate annual production process emissions of each input gas *i* for threshold applicability purposes using the default emission factors shown in Table I-1 to this subpart and Equation I-1 of this subpart.

$$E_i = S * EF_i * GWP_i * 0.001 \quad (\text{Eq. I-1})$$

Where:

*E<sub>i</sub>* = Annual production process emissions of input gas *i* for threshold applicability purposes (metric tons CO<sub>2</sub>e).

*S* = 100 percent of annual manufacturing capacity of a facility as calculated using Equation I-5 of this subpart (m<sup>2</sup>).

*EF<sub>i</sub>* = Emission factor for input gas *i* (kg/m<sup>2</sup>).

*GWP<sub>i</sub>* = Gas-appropriate GWP as provided in Table A-1 to subpart A of this part.

0.001 = Conversion factor from kg to metric tons.

*i* = Input gas.